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ARMY ELECTRONICS RESEARCH AND DEVELOPMENT COMMAND WS—ETC F/0 4/2
193040 MLRS, MISSILE NUMBER 003, ROUND NUMBER V-136/MD-3, 23 AP—ETC(U)
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DR 1174
28 APR 1968

LEVEL II

METEOROLOGICAL DATA REPORT

19344D NLRS
Missile No. 203
Round No. V-136/MQ-3
23 Apr 11 1981.

Number

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by

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ATMOSPHERIC SCIENCES LABORATORY
WHITE SANDS MISSILE RANGE, NEW MEXICO

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UNITED STATES ARMY LOGISTICS COMMAND

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20. ABSTRACT (Continue on reverse side if necessary and identify by block number) Meteorological data gathered for the launching of the 19304D MLRS, Missile No. 003, Round No. V-136/MD-3 presented in tabular form.		

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INTRODUCTION

19304D MLRS , Missile Number 003 , Round Number V-136/MD-3 , was launched from LC-33 , White Sands Missile Range (WSMR), New Mexico, at 1744 on 23 April 1981 . The scheduled launch time was 1730 MST .

DISCUSSION

Meteorological data were recorded and reduced by the White Sands Meteorological Team, Atmospheric Sciences Laboratory (ASL), White Sands Missile Range, New Mexico. The data were obtained by the following methods:

1. Observations

a. Surface

(1) Standard surface observations to include pressure, temperature ($^{\circ}$ C), relative humidity, dew point ($^{\circ}$ C), density (gm/m³), wind direction and speed, and cloud cover were made at the LC-33 met site at T-0 minutes.

(2) Monitor of wind speed and direction from one anemometer was provided in the launch control room.

b. Upper Air

(1) Low level wind data were obtained from RAPTS T-9 pibal observation at:

SITE AND ALTITUDE

LC-33 2KM
NICK 2KM

(b) Air structure data (rawinsonde) were collected at the following met sites.

SITE AND TIME

WSD 1330 MST
LC-37 1430 MST
WSD 1530 MST
LC-37 1630 MST
WSD 1730 MST

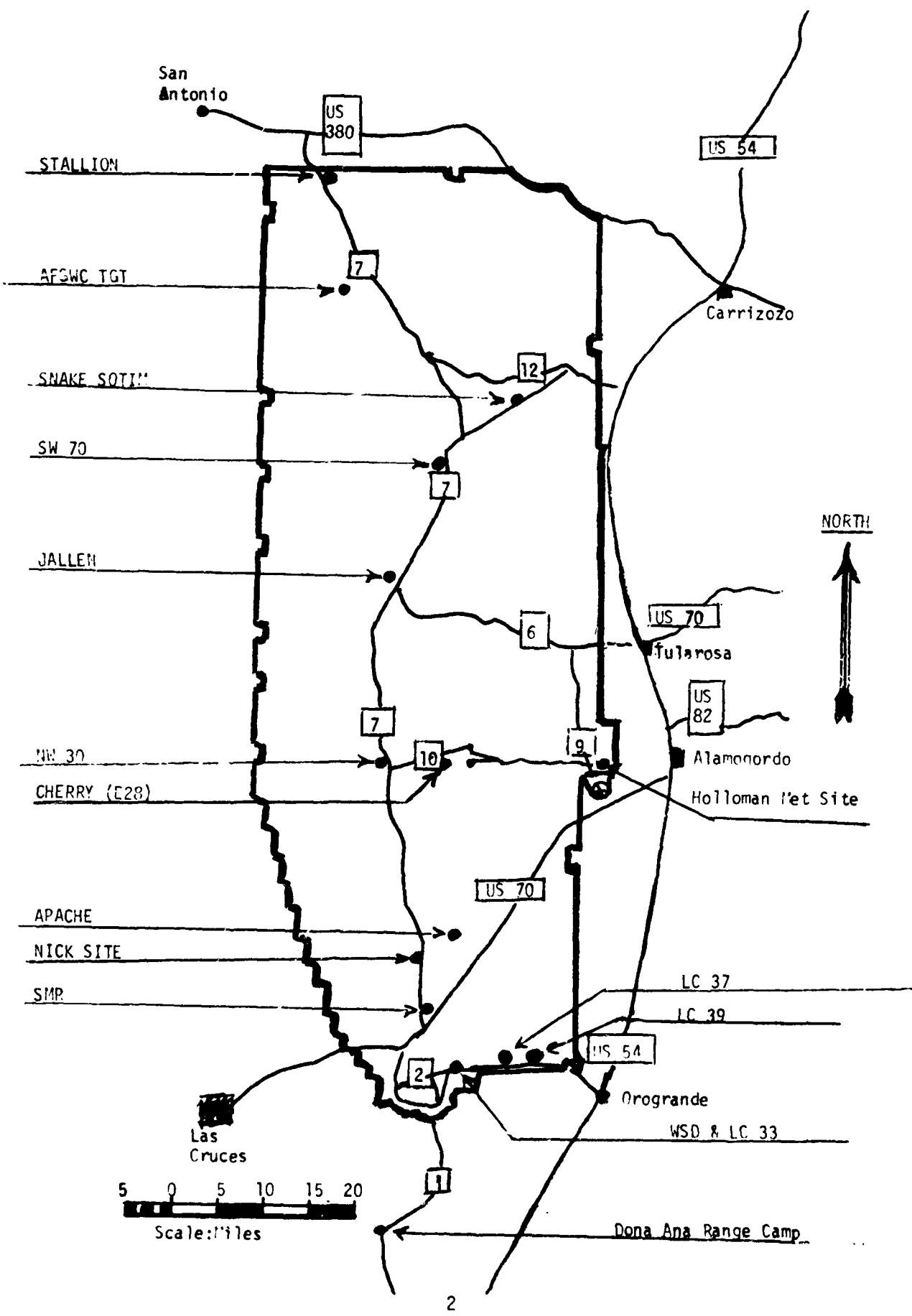


TABLE 1. Surface Observations taken at 1744 MST,
23 April 1981, at LC-33, 19304D MLRS,
Missile No. 003, Round No. V-136/MD-3.

ELEVATION	3983	FT/MSL
PRESSURE	880.9	MB
TEMPERATURE	17.3	°C
RELATIVE HUMIDITY	44	%
DEW POINT	4.9	°C
DENSITY	1052	GM/M ³
WIND SPEED	10	KTS
WIND DIRECTION	120	DEGREES
CLOUD COVER	10,000/1/AC 25,000/2/CS	1st Layer/AMT/TYPE 2nd Layer/AMT/TYPE

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TABLE 2 LC-33 FIXED POLE ANEMOMETER MEASURED WINDS

POLE #1			POLE #2			POLE #3		
T-TIME SEC	DIR DEG	SPEED KTS	T-TIME SEC	DIR DEG	SPEED KTS	T-TIME SEC	DIR DEG	SPEED KTS
T-30	136	11	T-30	136	12	T-30	156	15
T-20	138	12	T-20	144	11	T-20	148	15
T-10	133	13	T-10	135	12	T-10	147	11
T0.0	132	13	T0.0	129	10	T0.0	146	12
T+10	143	11	T+10	146	08	T+10	149	12

TABLE 3 LC-33 METEOROLOGICAL TOWER ANEMOMETER MEASURED WINDS (202 FT TOWER)

LEVEL #1, 12 FEET X484,982.64, Y185,057.73, H3983.00 (base)			LEVEL #2, 62 FEET X484,982.64, Y185,057.73, H3983.00 (base)		
T-TIME SEC	DIR DEG	SPEED KTS	T-TIME SEC	DIR DEG	SPEED KTS
T-30	150	14	T-30	149	18
T-20	149	14	T-20	141	17
T-10	144	10	T-10	144	17
T0.0	121	10	T0.0	146	16
T+10	129	13	T+10	147	18

LEVEL #3, 102 FEET X484,982.64, Y185,057.73, H3983.00 (base)			LEVEL #4, 202 FEET X484,982, Y185,057.73, H3983.00 (base)		
T-TIME SEC	DIR DEG	SPEED KTS	T-TIME SEC	DIR DEG	SPEED KTS
T-30	MISG	MISG	T-30	140	16
T-20	"	"	T-20	141	16
T-10	"	"	T-10	135	16
T0.0	"	"	T0.0	149	14
T+10	MISG	MISG	T+10	148	14

TABLE 4T-TIME PILOT-BALLOON MEASURED WIND DATA
DATE 23 April 1981

SITE: LC-33

TIME: 1750 MST

WSTM COORDINATES:

X= 486,037.24

Y= 782,350.16

H= 3977.30

SITE: NICK

TIME: 1744 MST

WSTM COORDINATES:

X= 470,734.56

Y= 255,775.64

H= 4126.57

LAYER MIDPOINT METERS AGL	DIRECTION DEGREES	SPEED KNOTS	LAYER MIDPOINT METERS AGL	DIRECTION DEGREES	SPEED KNOTS
surface	120	12	surface	182	14
150	130	09	150	189	23
210	142	12	210	189	24
270	140	15	270	188	24
330	143	15	330	187	24
390	153	17	390	185	24
450	155	18	500	181	25
510	157	18	650	176	24
570	151	21	800	167	17
630	141	20	950	119	05
690	140	18	1150	017	08
750	129	13	1350	008	16
810	108	07	1550	005	20
870	076	04	1750	008	21
930	010	16	2000	023	22

Data obtained from A
Single T-9 Radar ObservationData obtained from A Single Theodolite
Observation

TABLE 5

AIMING AND T-TIME COMPUTER MET MESSAGES
23 April 1981

WSD 1330 MST METCM1325065		LC-37 1430 MST METCM1325064		WSD 1530 MST METCM1325065	
232050122881		232150124879		232250122880	
00213016	29400881	00311011	29510879	00258013	29550880
01225021	29250871	01184019	29330869	01252017	29310870
02212018	28910846	02195017	28940844	02214016	28960845
03177014	28510806	03180012	28530804	03162010	28580806
04098013	28060759	04158012	28050757	04166012	28090758
05069016	27670714	05096012	27610712	05100008	27600713
06092018	27260671	06074018	27230669	06063015	27190670
07125021	26800630	07112022	26820629	07074026	26840629
08126024	26410591	08133031	26570590	08134032	26620591
LC-37 1630 MST METCM1325064		WSD 1730 MST METCM1325065			
232350124879		240050122881			
00373010	29290879	00249013	29130881		
01242017	29100868	*01237014	29060870		
02241021	28800843	*02232012	28860845		
03217014	28450804	03242015	28460806		
04162009	28030757	04243015	27980758		
05038009	27560712	05083010	27640713		
06024019	27220669	06050020	27370670		
07068024	26860628	07056025	26910630		
08128031	26610589	08106029	26600591		

* Wind direction and speed estimated due to GMD not tracking.

STATION ALTITUDE 3989.00 FEET MSL
23 APR. 81 1330 HRS MST
ASCENSION NO. 292

SIGNIFICANT LEVEL DATA
113000Z0292
WHITE SANDS
TABLE 6

GEODETIC COORDINATES
32.40043 LAT DEG
106.37033 LON DEG

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE MSL FEET	TEMPERATURE, AIR DEGREE CENTIGRADE	DEWPOINT CENTIGRADE	REL.HUM. PERCENT
980.9	3989.0	20.0	1.4	29.0
850.0	4990.4	15.2	-5	34.0
765.6	7860.0	7.4	-8	56.0
700.0	10259.1	1.4	-3.5	70.0
650.6	12182.1	-2.9	-8.5	65.0
623.2	13296.8	-6.1	-10.3	72.0
592.6	14585.1	-9.4	-16.7	55.0
578.4	15200.4	-10.4	-21.9	38.0
560.8	15982.4	-10.5	-29.6	19.0
518.2	17964.6	-14.9	-32.6	20.0
509.8	18370.9	-15.3	-33.1	20.0
500.0	18854.0	-14.3	-32.3	20.0
477.2	20014.8	-15.8	-30.8	26.0
453.2	21287.2	-18.8	-27.3	47.0
434.2	22332.3	-21.2	-30.7	42.0
400.0	24303.7	-26.5	-42.6	20.0
336.8	28316.5	-35.7	-48.9	24.0

STATION ALTITUDE 3989.00 FEET MSL
 23 APR. 81 1330 HRS MST
 ASCENSION NO. 292

UPPER AIR DATA
 1130020292
 WHITE SANDS
 TABLE 7

GEOGRAPHIC COORDINATES
 32.40043 LAT DEG
 106.37033 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES	TEMPERATURE DEWPOINT DEGREES	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES (TN)	INDEX OF REFRACTION
3989.0	980.9	20.1	1.4	29.0	1043.8	668.0	120.0	15.9
4000.0	880.6	19.9	1.4	29.1	1043.6	667.9	119.9	15.9
4600.0	865.0	17.6	*5	31.6	1033.7	665.1	117.0	16.1
5000.0	849.7	15.2	-5	34.1	1024.0	662.4	114.1	16.3
5500.0	834.4	13.8	-3	37.9	1010.1	660.8	111.3	16.5
6000.0	819.3	12.5	-2	41.7	996.5	659.3	108.5	16.7
6500.0	804.5	11.1	-2	45.6	983.2	657.7	102.3	15.7
7000.0	790.0	9.7	-3	49.4	970.0	656.2	89.5	13.5
7500.0	775.7	8.4	-6	53.2	957.1	654.6	73.8	12.3
8000.0	761.6	7.0	-9	56.8	944.2	653.0	57.3	12.1
8500.0	747.5	5.8	-14	59.7	930.9	651.6	45.3	13.0
9000.0	733.7	4.5	-19	62.7	917.9	650.1	41.4	14.3
9500.0	720.1	3.3	-25	65.6	905.0	648.6	38.2	15.7
10000.0	706.8	2.0	-3.1	68.5	892.4	647.1	43.9	16.5
10500.0	693.6	*9	-4.1	69.4	879.7	645.7	49.4	17.3
11000.0	680.5	-3	-5.4	68.1	866.8	644.3	53.6	18.2
11500.0	667.7	-1.4	-6.7	66.8	854.1	642.9	56.1	18.8
12000.0	655.1	-2.5	-8.1	65.5	841.6	641.5	58.5	19.4
12500.0	642.7	-3.8	-9.0	67.0	829.7	639.9	60.8	19.9
13000.0	630.4	-5.2	-9.8	70.1	818.3	638.2	63.3	20.5
13500.0	618.3	-6.6	-11.3	69.3	806.8	636.5	65.5	21.1
14000.0	606.3	-7.9	-13.7	62.7	795.2	634.9	68.7	22.5
14500.0	594.6	-9.2	-16.3	56.1	783.8	633.3	71.7	24.1
15000.0	583.0	-10.1	-20.4	43.5	771.4	632.1	73.4	26.7
15500.0	571.6	-10.4	-24.4	30.7	757.5	631.6	73.4	31.0
16000.0	560.4	-10.5	-29.6	19.0	743.1	631.4	73.4	35.3
16500.0	549.3	-11.6	-30.4	19.3	731.6	630.1	73.1	38.3
17000.0	538.5	-12.8	-31.2	19.5	720.2	628.7	72.8	41.2
17500.0	527.9	-13.9	-32.0	19.8	709.0	627.4	71.8	42.2
18000.0	517.5	-14.9	-32.8	20.0	697.9	626.1	70.8	43.2
18500.0	507.2	-15.0	-32.9	20.0	684.3	626.0	68.9	43.3
19000.0	497.1	-14.5	-32.0	20.8	669.3	626.7	66.9	42.9
19500.0	487.2	-15.1	-31.4	23.3	657.6	625.9	64.6	40.4
20000.0	477.5	-15.8	-30.8	25.9	646.1	625.1	62.0	37.9
20500.0	467.9	-16.9	-29.0	34.0	635.9	623.7	63.8	36.4
21000.0	458.5	-18.1	-27.8	42.3	626.0	622.3	65.9	35.0
21500.0	449.3	-19.3	-27.9	46.0	616.2	620.9	68.0	34.6
22000.0	440.2	-20.4	-29.6	43.6	606.5	619.4	69.8	35.8
22500.0	431.2	-21.7	-31.5	40.1	597.0	617.9	71.6	37.0
23000.0	422.3	-23.0	-34.3	34.5	587.9	616.3	70.9	38.8

STATION ALTITUDE 3989.00 FEET MSL
 23 APR. 81 1330 HRS MST
 ASCENSION NO. 292

UPPER AIR DATA
 11300020292
 WHITE SANDS
 TABLE 7 CON'T

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEWEPOINT DEGREES CENTIGRADE	REL.HUM. PERCENT	SPEED OF SOUND METER KNOTS	WIND DIRECTION DEGREES(TN)	WIND SPEED KNOTS	INDEX OF REFRACTION
23500.0	413.6	-24.3 -37.2	29.0	579.0 614.6	67.9	41.6	1.000130
24000.0	405.1	-25.7 -40.5	23.4	570.2 612.9	65.2	44.4	1.000128
24500.0	396.6	-26.9 -42.9	20.2	561.2 611.3	62.7	46.7	1.000126
25000.0	388.2	-28.1 -43.7	20.7	551.9 609.9	59.9	47.5	1.000124
25500.0	380.0	-29.2 -44.4	21.2	542.7 608.5	57.2	48.5	1.000122
26000.0	372.0	-30.4 -45.2	21.7	533.7 607.0	54.6	49.5	1.000120
26500.0	364.1	-31.5 -46.0	22.2	524.9 605.6	51.1	50.6	1.000118
27000.0	356.3	-32.7 -46.8	22.7	516.2 604.1	48.7	49.7	1.000116
27500.0	348.8	-33.8 -47.6	23.2	507.7 602.7	46.3	47.3	1.000114
28000.0	341.4	-35.0 -48.4	23.7	499.3 601.3	44.9	45.9	1.000112

STATION ALTITUDE 3989.00 FEET MSL
23 APR. 81 1330 HRS MST
ASCENSION NO. 292

MANDATORY LEVELS
1130020292
WHITE SANDS
TABLE 8

GEODETIC COORDINATES
32.40043 LAT DEG
106.37033 LON DEG

PRESSURE MILLIBARS	GEOPOTENTIAL FEET	TEMPERATURE			REL.HUM. PERCENT	WIND DATA	
		DEGREES	AIR DEWPONT	CENTIGRADE		DIRECTION DEGREES (TN)	SPEED KNOTS
850.0	4987.	15.2	-.5	34.	114.2	16.3	
800.0	6658.	10.7	-.2	47.	98.7	14.9	
750.0	8408.	6.0	-1.3	59.	46.0	12.8	
700.0	10249.	1.4	-3.5	70.	46.7	16.9	
650.0	12193.	-3.0	-8.6	65.	59.3	19.6	
600.0	14252.	-8.6	-15.1	59.	70.3	23.3	
550.0	16452.	-11.6	-30.4	19.	73.1	38.1	
500.0	18828.	-14.3	-32.3	20.	67.6	43.4	
450.0	21428.	-19.2	-27.8	46.	67.8	34.5	
400.0	24263.	-26.5	-42.6	20.	63.8	46.1	
350.0	27383.	-33.6	-47.5	23.			

STATION ALTITUDE 4051.37 FEET MSL
23 APR. 51 1430 HRS MST
ASCENSION NO. 37

SIGNIFICANT LEVEL DATA
1130180037
LC-37

TABLE 9

GEODETIC COORDINATES
32°40'17.5" LAT DEG
106°31'23.2" LON DEG

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE MSL FEET	TEMPERATURE AIR DEPOINT DEGREES CENTIGRADE	REL.HUM. PERCENT
878.8	4051.4	21.0	35.0
869.0	4368.7	19.0	34.0
850.0	4988.8	16.1	37.0
807.8	6399.6	11.9	45.0
737.6	8867.7	4.5	-1.7
700.0	10261.5	1.3	-2.5
678.2	11096.5	-6	-4.3
669.0	11455.2	-1.2	-6.5
650.0	12208.7	-2.7	-10.9
618.2	13507.4	-6.5	-12.0
604.0	14103.5	-7.5	-20.3
591.3	14647.7	-7.3	-18.5
576.8	15283.4	-7.5	-26.0
516.6	18067.2	-14.5	-31.4
500.0	18879.4	-15.6	-32.4
467.2	20555.4	-18.0	-33.6
443.4	21831.2	-21.9	-33.5
428.0	22687.0	-22.0	-32.4
400.0	24311.9	-26.0	-37.1
354.8	27123.1	-33.9	-46.0
340.6	28063.1	-35.0	-47.0
320.2	29470.6	-38.6	-49.3
300.0	30932.2	-42.5	-51.0
275.6	32782.8	-47.5	
245.1	35311.6	-54.5	

STATION ALTITUDE 4051.37 FEET MSL
23 APR. 81 1430 HRS MST
ASCENSION NO. 37

UPPER AIR DATA
1130180037
LC-37

TABLE 10

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEPOINT DEGREES CENTIGRADE	REL.HUM. PERCENT	SPEED OF SOUND METERS	WIND DATA DIRECTION DEGREES(TN)	SPEED KNOTS	INDEX OF REFRACTION
4051.4	878.8	21.0 5.0	35.0	1036.9 669.4	175.0	11.1	1.0000269
4500.0	864.9	18.4 2.5	34.6	1030.2 666.2	163.4	10.1	1.0000262
5000.0	849.7	16.1 1.4	37.1	1020.3 663.5	148.6	9.7	1.0000258
5500.0	834.5	14.6 1.1	39.9	1007.3 661.8	133.4	9.9	1.0000255
6000.0	819.5	13.1 .7	42.7	994.4 660.1	119.6	10.7	1.0000251
6500.0	804.8	11.6 .3	45.8	981.7 658.4	108.5	12.1	1.0000248
7000.0	790.1	10.1 .1	49.6	968.9 656.6	100.0	13.7	1.0000245
7500.0	775.7	8.6 -.3	53.5	956.3 654.9	95.4	12.7	1.0000242
8000.0	761.6	7.1 -.7	57.3	943.9 653.1	89.9	11.7	1.0000238
8500.0	747.7	5.6 -1.3	61.2	931.7 651.4	83.7	10.9	1.0000235
9000.0	733.9	4.2 -1.8	65.1	919.3 649.7	71.8	10.7	1.0000231
9500.0	720.3	3.0 -2.0	69.4	906.0 648.3	58.4	11.4	1.0000228
10000.0	709.9	1.9 -2.3	73.7	892.9 647.0	48.1	12.6	1.0000225
10500.0	695.7	.8 -3.0	76.0	879.9 645.6	46.6	14.4	1.0000221
11000.0	680.7	-.4 -4.1	76.0	867.1 644.2	45.3	16.1	1.0000216
11500.0	667.9	-1.3 -6.8	66.2	854.0 643.0	45.7	17.7	1.0000209
12000.0	655.2	-2.3 -9.7	56.9	841.2 641.7	50.9	19.0	1.0000203
12500.0	642.7	-3.6 -11.1	55.7	829.2 640.2	55.3	20.5	1.0000198
13000.0	630.4	-5.0 -11.5	60.3	817.8 638.4	59.8	22.1	1.0000196
13500.0	618.4	-6.5 -12.0	64.9	806.6 636.7	65.3	24.1	1.0000193
14000.0	606.4	-7.3 -18.5	40.2	794.9 635.5	70.0	26.3	1.0000184
14500.0	594.7	-7.4 -19.0	38.6	776.8 635.4	72.6	29.0	1.0000181
15000.0	583.2	-7.4 -22.2	29.5	764.1 635.3	74.1	32.3	1.0000176
15500.0	571.9	-8.0 -26.4	21.1	751.1 634.5	75.2	35.5	1.0000171
16000.0	560.7	-9.3 -27.4	21.3	739.9 632.9	74.3	36.8	1.0000168
16500.0	549.7	-10.6 -28.4	21.4	728.9 631.4	75.2	38.0	1.0000166
17000.0	538.9	-11.8 -29.3	21.6	718.1 629.9	72.4	39.1	1.0000163
17500.0	528.3	-13.1 -30.3	21.8	707.4 628.4	72.4	39.2	1.0000160
18000.0	518.0	-14.3 -31.3	22.0	697.0 626.8	72.5	39.4	1.0000158
18500.0	507.7	-15.1 -31.9	22.0	685.1 625.9	71.8	40.9	1.0000155
19000.0	497.6	-15.8 -32.5	22.1	673.3 625.1	70.7	43.7	1.0000152
19500.0	487.6	-16.5 -32.8	22.7	661.6 624.2	69.5	46.1	1.0000150
20000.0	477.8	-17.2 -33.2	23.3	650.2 623.3	67.7	46.7	1.0000147
20500.0	468.2	-17.9 -33.5	23.9	638.9 622.5	66.0	47.4	1.0000144
21000.0	458.8	-19.4 -33.4	27.5	629.5 620.7	64.8	45.3	1.0000142
21500.0	449.5	-20.9 -33.4	31.4	620.5 618.9	63.6	42.0	1.0000140
22000.0	440.3	-21.9 -33.2	34.8	610.4 617.6	62.3	38.9	1.0000138
22500.0	431.3	-22.0 -32.6	37.1	598.0 617.5	61.3	38.3	1.0000136
23000.0	422.5	-22.8 -33.3	37.2	587.6 616.5	60.2	37.7	1.0000133
23500.0	413.8	-24.0 -34.8	36.0	578.4 615.0	58.1	38.1	1.0000131

STATION ALTITUDE 4051.37 FEET MSL
 23 APR. 61 1430 HRS MST
 ASCENSION NO. 37

UPPER AIR DATA
 1130180037
 LC-37

TABLE 10 CON'T

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES	DEWPOINT CENTIGRADE	REL.HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DIRECTION DEGREES (IN)	WIND SPEED KNOTS	INDEX OF REFRACTION
24000.0	405.2	-25.2	-36.2	34.8	569.3	613.5	59.1	40.2	1.000128
24500.0	390.8	-26.5	-37.7	33.6	560.4	611.9	58.9	42.3	1.000126
25000.0	380.4	-27.9	-39.3	32.5	551.7	610.1	58.1	43.7	1.000124
25500.0	380.2	-29.3	-40.9	31.5	543.2	608.4	56.5	44.2	1.000122
26000.0	372.2	-30.7	-42.4	30.4	534.8	606.6	54.9	44.7	1.000120
26500.0	364.4	-32.1	-44.0	29.3	526.6	604.8	53.1	44.9	1.000118
27000.0	356.7	-33.6	-45.6	28.3	518.5	603.1	50.2	44.1	1.000116
27500.0	349.0	-34.3	-46.4	28.0	509.1	602.1	47.2	43.5	1.000114
28000.0	341.5	-34.9	-46.9	28.0	499.4	601.3	44.4	42.7	1.000112
28500.0	334.1	-36.1	-47.7	28.9	491.0	599.8	42.8	41.0	1.000110
29000.0	326.9	-37.4	-48.5	30.0	483.0	598.2	41.0	39.3	1.000108
29500.0	319.8	-38.7	-49.5	30.4**	475.1	596.6	40.8	37.1	1.000106
30000.0	312.7	-40.0	-50.3	19.8**	467.3	594.9	42.7	34.2	1.000104
30500.0	305.8	-41.3	-61.4	9.2**	459.6	593.1	45.0	31.5	1.000102
31000.0	299.1	-42.7			452.1	591.4	49.0	30.8	1.000101
31500.0	292.4	-44.0			444.5	589.7	53.1	30.3	1.000099
32000.0	285.8	-45.4			437.1	587.9	56.3	30.5	1.000097
32500.0	279.4	-46.7			429.8	586.2	57.8	31.4	1.000096
33000.0	273.0	-48.1			422.6	584.4	59.3	32.4	1.000094
33500.0	266.7	-49.5			415.4	582.6			1.000093
34000.0	260.6	-50.9			408.4	580.8			1.000091
34500.0	254.6	-52.3			401.5	579.0			1.000089
35000.0	248.7	-53.6			394.7	577.2			1.000088

** AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

STATION ALTITUDE 4051.37 FEET MSL
23 APR. 81 1430 HRS MST
ASCENSION NO. 37

MANDATORY LEVELS
1130180037
LC-37

TABLE 11

PRESSURE MILLIBARS	GEOPOTENTIAL FEET	TEMPERATURE			REL.HUM. PERCENT	WIND DATA	
		AIR DEGREES	DEWPNT CENTIGRADE	DIRECTION DEGREES ITN)		SPEED KNOTS	
850.0	4985.	16.1	1.4	37.	149.0	9.7	
800.0	6661.	11.1	.2	47.	105.4	12.6	
750.0	8412.	5.9	-1.2	61.	84.8	11.0	
700.0	10251.	1.3	-2.5	76.	47.3	13.5	
650.0	12196.	-2.7	-10.9	53.	52.7	19.6	
600.0	14257.	-7.4	-19.7	37.	72.1	27.5	
550.0	16473.	-10.5	-28.3	21.	73.3	38.0	
500.0	18853.	-15.6	-32.4	22.	71.0	43.0	
450.0	21440.	-20.8	-33.4	31.	63.7	42.3	
400.0	24272.	-26.0	-37.1	34.	59.0	41.5	
350.0	27387.	-34.3	-46.3	28.	47.7	43.6	
300.0	30871.	-42.5			48.3	30.9	
250.0	34817.	-53.3					

** AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

STATION ALTITUDE 5989.0 FEET
23 APR. 52 1530 HRS
ASCENSION NO. 43

SIGNIFICANT LEVEL DATA
115302Z293
WHITE CLOUDS

TABLE 12

GEODETIC COORDINATES
32°46'43" LAT DEC
106°37'33" LONG DEC

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE MSL FEET	TEMPERATURE AIR DEGREES CENTIGRADE	DEWPONT CENTIGRADE	REL. HUM. PERCENT
880.0	3989.0	21.5	4.6	33.0
860.6	4618.2	16.9	4.6	44.0
850.0	4964.7	16.0	4.1	45.0
752.6	8304.6	6.3	-0.2	63.0
700.0	10238.2	.4	-1.7	86.0
668.4	11451.8	-2.3	-3.1	94.0
623.4	13261.3	-5.9	-8.2	84.0
597.0	14374.0	-7.6	-17.4	43.0
579.8	15123.2	-7.4	-19.9	36.0
537.2	17061.6	-11.9	-23.3	38.0
500.0	18857.7	-14.8	-26.5	36.0
435.0	22272.1	-22.7	-33.3	37.0
420.4	23094.0	-24.1	-32.2	47.0
413.0	23520.1	-24.3	-33.5	42.0
400.0	24284.3	-26.3	-36.3	38.0
356.8	26962.6	-33.8	-43.6	36.0

STATION ALTITUDE 3989.00 FEET MSL
 23 APR. 81 1530 HRS MST
 ASCENSION NO. 293

UPPER AIR DATA
 1130020293
 WHITE SANDS

TABLE 13

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEWEPOINT DEGREES CENTIGRADE	REL.HUM. PERCENT	HUM. GM/CURIC METER	SPEED OF SOUND KNOTS	DIRECTION DEGREES(TIN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
3989.0	880.0	21.5 4.6	33.0	1036.6	669.9	145.0	13.0	1.000268
4000.0	879.7	21.4 4.6	33.2	1036.5	669.9	144.8	13.0	1.000268
4500.0	864.2	17.8 4.7	41.9	1031.0	665.7	137.5	12.1	1.000268
5000.0	848.9	15.9 4.1	45.2	1019.4	663.5	129.1	11.4	1.000264
5500.0	833.6	14.4 3.6	47.9	1006.1	661.9	119.9	11.1	1.000260
6000.0	818.5	13.0 3.0	50.6	993.0	660.2	110.3	11.0	1.000256
6500.0	803.8	11.5 2.4	53.3	980.2	658.5	101.3	11.1	1.000252
7000.0	789.2	10.1 1.7	56.0	967.5	656.7	97.3	10.3	1.000248
7500.0	775.0	8.6 1.0	58.7	955.0	655.0	92.6	9.6	1.000244
8000.0	761.0	7.2 .3	61.4	942.8	653.3	86.9	9.9	1.000240
8500.0	747.1	5.7 -.3	65.3	930.5	651.5	81.7	10.5	1.000237
9000.0	733.2	4.2 -.5	71.3	918.3	649.8	73.5	9.4	1.000234
9500.0	719.6	2.7 -.9	77.2	906.2	648.0	63.1	8.7	1.000230
10000.0	706.3	1.1 -1.4	83.2	894.4	646.1	52.1	9.3	1.000227
10500.0	693.1	.2 -2.0	87.7	881.9	644.6	42.6	10.1	1.000223
11000.0	680.0	-1.3 -2.6	91.0	868.9	643.2	37.7	13.1	1.000220
11500.0	667.2	-2.4 -3.3	93.7	856.1	641.9	34.6	16.1	1.000216
12000.0	654.4	-3.4 -4.6	91.0	843.0	640.7	36.5	19.1	1.000210
12500.0	642.0	-4.4 -6.0	88.2	830.2	639.4	40.0	22.3	1.000205
13000.0	629.7	-5.4 -7.4	85.4	817.5	638.2	44.3	25.0	1.000201
13500.0	617.6	-6.1 -9.8	75.2	804.4	637.2	54.3	26.7	1.000195
14000.0	605.7	-6.6 -13.8	56.8	790.7	636.4	62.9	29.1	1.000187
14500.0	594.1	-7.1 -17.8	41.8	777.0	635.8	71.2	31.4	1.000181
15000.0	582.6	-7.3 -19.4	37.2	762.9	635.4	78.3	34.3	1.000177
15500.0	571.3	-8.3 -20.5	36.4	750.7	634.3	79.8	35.4	1.000174
16000.0	560.1	-9.4 -21.4	36.9	739.4	632.9	81.1	36.3	1.000171
16500.0	549.2	-10.6 -22.3	37.4	728.2	631.5	80.8	36.8	1.000168
17000.0	538.5	-11.8 -23.2	37.9	717.2	630.1	79.4	36.9	1.000165
17500.0	527.9	-12.6 -24.1	37.5	705.4	629.0	77.8	37.3	1.000162
18000.0	517.4	-13.4 -25.0	37.0	693.6	628.0	74.9	39.8	1.000159
18500.0	507.2	-14.2 -25.9	36.4	682.0	627.1	72.3	42.4	1.000156
19000.0	497.1	-15.1 -26.8	36.0	670.8	625.9	70.3	44.7	1.000153
19500.0	487.1	-16.3 -27.8	36.2	661.3	624.5	68.8	46.5	1.000151
20000.0	477.2	-17.4 -28.8	36.3	644.9	623.1	67.4	48.4	1.000148
20500.0	467.6	-18.6 -29.8	36.5	639.7	621.7	65.5	48.1	1.000145
21000.0	458.2	-19.8 -30.8	36.6	629.6	620.3	62.9	45.7	1.000143
21500.0	448.9	-20.9 -31.8	36.8	619.8	618.8	60.0	43.5	1.000141
22000.0	439.9	-22.1 -32.8	36.9	610.1	617.4	57.9	41.5	1.000138
22500.0	430.9	-23.1 -32.9	39.8	600.1	616.2	56.8	39.7	1.000136
23000.0	422.0	-23.9 -32.3	45.9	589.9	615.1	55.6	37.9	1.000134

STATION ALTITUDE 3989.00 FEET
23 APR. 81 1530 HRS CDT
ASCENSION NO. 270

WEATHER AIR DATA
TEMPERATURE 20.93
WIND VELOCITY 0.00
WIND DIRECTION 000

TABLE 1, CON't

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREE CENTIGRADE	REL.HUM. PERCENT	SPEED OF SOUND METER KNOTS	WIND DATA DIRECTION DEGREES (TRUE)	INDEX OF REFRACTION
23500.0	413.3	-24.3	-33.4	42.2	578.4	614.7
24000.0	404.8	-25.6	-35.3	39.5	569.4	613.1
24500.0	396.3	-26.9	-36.9	37.8	560.6	611.4
25000.0	388.0	-28.3	-38.3	37.5	551.9	609.7
25500.0	379.8	-29.7	-39.6	37.1	543.4	607.9
26000.0	371.6	-31.1	-41.0	36.7	535.0	606.1
26500.0	363.9	-32.5	-42.4	36.3	526.7	604.4

ATMOSPHERIC COORDINATES
32°49'04" LAT DEG
106°37'03" LON. DEG

STATION ALTITUDE 3989.00 FEET MSL
 23 APR. 81 1530 HRS MST
 ASCENSION NO. 293

MANDATORY LEVELS
 1130020293
 WHITE SANDS

TABLE 14

PRESSURE MILLIBARS	GEOPOTENTIAL FEET	TEMPERATURE DEGREES	AIR DEGREES	DEWPOINT CENTIGRADE	RLL.HUM. PERCENT	WIND DATA DIRECTION DEGREES(TN)	SPEED KNOTS
850.0	4961.	16.0	4.1	45.	129.8	11.5	
800.0	6637.	11.2	2.2	54.	100.2	10.9	
750.0	8390.	6.0	-.2	64.	82.8	10.4	
700.0	10228.	.4	-1.7	86.	47.5	9.6	
650.0	12166.	-3.7	-5.1	90.	37.8	20.2	
600.0	14229.	-6.9	-16.1	48.	67.0	30.1	
550.0	16445.	-10.5	-22.2	37.	80.9	36.8	
500.0	18831.	-14.8	-26.5	36.	70.8	44.1	
450.0	21418.	-20.8	-31.7	37.	60.4	43.7	
400.0	24244.	-26.3	-36.3	38.	59.6	39.9	

STATION ALTITUDE 4051.37 FEET MSL
23 APR. 81 1630 HRS MSL
ASCENSION NO. 38

SIGNIFICANT LEVEL DATA

1130180036
LC-37

TABLE 15

GEODETIC COORDINATES
32°40'17.5" LAT DEG
106°31'23.2" LONG DEG

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE METERS MSL	TEMPERATURE DEGREES CENTIGRAVE	RLL-HUM. PERCENT
878.6	4051.4	19.1	37.0
870.8	4302.1	17.2	45.0
850.0	4976.7	14.5	49.0
800.2	6641.0	10.3	57.0
740.4	8745.9	4.9	66.0
712.0	9789.9	1.9	79.0
700.0	10239.6	.1	85.0
674.0	11235.2	-1.4	95.0
656.0	11944.1	-2.1	75.0
637.8	12677.0	-4.2	78.0
624.7	13213.9	-5.6	75.0
610.8	13794.1	-6.0	64.0
593.0	14553.9	-7.2	32.0
584.4	14928.5	-6.8	26.0
576.0	15299.5	-7.5	26.0
567.4	15683.7	-8.7	26.0
532.8	17274.3	-12.8	26.0
500.0	18862.1	-14.8	27.0
436.6	22195.4	-21.3	34.0
400.0	24299.3	-26.4	32.0
363.8	26529.6	-32.1	31.0
317.0	29677.5	-40.0	31.0
300.0	30909.2	-42.8	
261.2	33934.7	-50.5	
250.0	34871.7	-52.5	

STATION ALTITUDE 4051.37 FEET MSL
 23 APR. 81 1630 HRS MST
 ASCENSION NO. 38

UPPER AIR DATA
 1130180036
 LC-37
 TABLE 16

GEOGRAPHIC COORDINATES
 32.40175 LAT UEG
 106.31232 LON UEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES	DEPOINT CENTIGRADE	REL.HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA		
							DIRECTION DEGREES(TIN)	SPEED KNOTS	INDEX OF REFRACTION
4051.4	878.6	19.1	4.1	37.0	1043.6	667.2	210.0	9.9	1.000269
4500.0	864.0	16.4	4.8	46.2	1036.3	664.2	181.1	9.0	1.000270
5000.0	849.3	14.4	3.9	49.1	1025.1	661.9	151.5	10.8	1.000265
5500.0	834.0	13.2	3.4	51.5	1011.1	660.4	133.6	14.5	1.000261
6000.0	819.0	11.9	2.9	53.9	997.4	658.9	125.4	15.8	1.000257
6500.0	804.3	10.7	2.3	56.3	983.9	657.4	119.8	14.3	1.000253
7000.0	789.7	9.4	1.8	58.9	970.4	655.9	114.2	12.8	1.000249
7500.0	775.2	8.1	1.2	61.5	957.1	654.4	109.1	11.2	1.000245
8000.0	761.1	6.8	.5	64.1	944.0	652.9	102.4	9.6	1.000241
8500.0	747.1	5.5	.2	66.7	931.1	651.3	81.4	6.8	1.000237
9000.0	733.4	4.2	.7	70.7	918.5	649.7	43.1	5.8	1.000233
9500.0	719.8	2.7	-1.1	75.9	906.2	648.0	13.7	7.6	1.000230
10000.0	706.4	1.1	-1.7	81.8	894.8	646.0	359.4	10.5	1.000227
10500.0	693.1	-3	-2.2	87.1	882.4	644.4	1.2	13.3	1.000223
11000.0	680.1	-1.0	-2.3	91.1	868.1	643.6	8.5	16.1	1.000220
11500.0	667.2	-1.7	-3.6	86.3	853.9	642.8	16.4	18.6	1.000214
12000.0	654.6	-2.3	-6.0	75.2	839.9	641.9	25.4	20.9	1.000207
12500.0	642.1	-3.7	-7.1	77.3	828.4	640.2	32.7	23.3	1.000203
13000.0	629.9	-5.0	-8.6	76.2	816.9	638.5	40.4	23.6	1.000199
13500.0	617.8	-5.8	-10.4	69.6	803.7	637.5	47.9	24.3	1.000194
14000.0	605.9	-6.3	-13.8	55.3	790.1	636.8	58.4	26.0	1.000187
14500.0	594.2	-7.1	-20.2	34.5	777.5	635.7	68.5	28.8	1.000180
15000.0	582.8	-6.9	-23.2	26.0	762.1	635.8	72.1	31.2	1.000175
15500.0	571.5	-8.1	-24.2	26.0	750.8	634.4	74.0	33.4	1.000172
16000.0	560.3	-9.5	-25.4	26.0	740.1	632.7	71.0	34.9	1.000169
16500.0	549.4	-10.6	-26.5	26.0	729.2	631.2	67.1	36.5	1.000166
17000.0	538.6	-12.1	-27.6	26.0	718.4	629.6	65.2	37.0	1.000164
17500.0	526.0	-13.1	-28.4	26.1	707.0	628.4	63.7	39.3	1.000161
18000.0	517.5	-13.7	-29.5	26.5	694.7	627.6	63.4	40.6	1.000158
18500.0	507.3	-14.3	-29.3	26.8	682.6	626.9	63.5	41.8	1.000155
19000.0	497.2	-15.1	-29.7	27.3	670.9	626.0	63.2	43.0	1.000152
19500.0	487.2	-16.0	-30.1	28.3	659.9	624.8	62.8	46.6	1.000150
20000.0	477.4	-17.0	-30.6	29.4	649.1	623.6	62.2	47.6	1.000147
20500.0	467.8	-18.0	-31.1	30.4	638.4	622.4	61.3	45.9	1.000145
21000.0	458.4	-19.0	-31.6	31.5	628.0	621.2	60.3	44.1	1.000142
21500.0	449.0	-19.9	-32.2	32.5	617.7	620.0	59.2	43.0	1.000140
22000.0	440.1	-20.9	-32.7	33.6	607.6	618.8	57.9	38.6	1.000138
22500.0	431.1	-22.0	-33.7	33.7	597.9	617.4	57.4	37.6	1.000135
23000.0	422.2	-23.3	-34.9	33.2	588.4	615.9	57.6	38.0	1.000133
23500.0	413.5	-24.5	-36.1	32.8	579.1	614.4	57.8	38.3	1.000131

STATION ALTITUDE 4051.37 FEET
23 APR. 61 1630 HRS WST
ASCENSION NO. 38

UPPER AIR DATA
JULY 1958
LFB

TABLE 16 CONT'

GEOGRAPHIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL.HUM. PERCENT	DENSITY GM/CURIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES (TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
24000.0	403.0	-25.7	32.3	570.0	612.4	53.2	40.0	1.000129
24500.0	396.6	-26.9	38.6	561.0	611.4	58.7	42.0	1.000126
25000.0	389.3	-28.2	39.8	552.0	609.8	53.9	44.0	1.000124
25500.0	380.0	-29.5	41.0	543.3	608.2	57.6	46.0	1.000122
26000.0	372.1	-30.7	42.2	534.7	606.6	56.4	48.1	1.000120
26500.0	364.3	-32.0	43.4	526.2	605.0	55.5	49.9	1.000118
27000.0	356.4	-33.3	44.5	517.5	603.4	54.9	51.4	1.000116
27500.0	348.7	-34.5	45.6	510.0	601.6	54.4	52.8	1.000114
28000.0	341.1	-35.8	46.8	500.6	600.2	53.4	51.9	1.000112
28500.0	333.8	-37.0	47.9	492.4	598.6	52.4	51.0	1.000110
29000.0	326.5	-38.3	49.0	484.3	597.0	51.3	49.9	1.000108
29500.0	319.5	-39.6	50.1	476.4	595.4	49.7	46.6	1.000107
30000.0	312.5	-40.7	53.7	468.3	593.9	47.9	43.3	1.000105
30500.0	305.0	-41.9	61.0	460.2	592.5	46.3	40.1	1.000103
31000.0	298.8	-43.0		452.3	591.0	47.5	37.1	1.000101
31500.0	292.0	-44.3		444.5	589.3	49.4	34.2	1.000099
32000.0	285.4	-45.6		436.9	587.7	50.7	32.9	1.000097
32500.0	278.9	-46.8		429.4	586.1	52.5	32.3	1.000096
33000.0	272.6	-48.1		422.0	584.4			1.000094
33500.0	266.4	-49.4		414.8	582.8			1.000092
34000.0	260.4	-50.6		407.7	581.1			1.000091
34500.0	254.4	-51.7		400.2	579.7			1.000089

** AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

STATION ALTITUDE 4051.37 FEET MSL
23 APR. 81 1630 HRS MST
ASCENSION NO. 38

MANDATORY LEVELS

1130180038

Lc-37

GEOGRAPHIC COORDINATES
32.40175 LAT DEG
106.31232 LON DEG

TABLE 17

PRESSURE MILLIBARS	GEOPOTENTIAL FEET	TEMPERATURE		REL.HUM. PERCENT	WIND DATA DIRECTION DEGREES (IN)	SPEED KNOTS
		AIR DEGREES	DEWPONT CENTIGRAVE			
850.0	4973.	14.5	3.9	49.	152.8	10.6
800.0	6642.	10.3	2.2	57.	118.0	15.9
750.0	8392.	5.8	-0	66.	87.2	7.3
700.0	10230.	1	-2.1	85.	355.9	11.9
650.0	12171.	-2.8	-6.4	76.	28.2	21.8
600.0	14236.	-6.7	-16.7	45.	63.6	27.3
550.0	16453.	-10.7	-26.4	26.	67.4	36.4
500.0	18836.	-14.9	-29.6	27.	63.4	43.1
450.0	21427.	-19.9	-32.1	32.	59.3	41.6
400.0	24259.	-26.4	-38.1	32.	58.5	41.1
350.0	27375.	-34.3	-45.4	31.	54.5	52.6
300.0	30848.	-42.8	-	47.3	37.8	
250.0	34796.	-52.5	-			

** AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

STATION ALTITUDE 3989.00 FEET
23 APR. 61
ASCENSION NO. 294

SIGNIFICANT LEVEL DATA
1357.020294
PARTICULUS
TABLE 18

STATION COORDINATES,
32°40'04.3 LAT.
106°37'33.3 LONG.

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE M.S.L. FEET	TEMPERATURE		REL. HUM. PERCENT
		AIR DEGREES	DEWPONT CENTIGRADE	
3400.0	3039.0	17.7	5.6	45.0
3300.0	4274.4	16.0	3.8	47.0
3274.4	7776.4	6.6	.7	96.0
3100.0	9492.9	2.5	-9	78.0
3000.0	10236.0	1.8	-2.0	76.0
2900.2	10311.7	1.2	-4.4	96.0
2857.4	13504.4	.6	-6.4	77.0
2800.6	14252.6	-7.3	-11.3	75.0
2792.2	14693.6	-6.9	-10.5	46.0
2732.6	17267.5	-12.4	-25.0	34.0
500.0	18867.5	-14.8	-27.1	34.0
400.0	24306.3	-25.7	-35.9	34.0
345.0	27768.7	-35.0	-45.2	34.0

STATION ALTITUDE 3989.00 FEET MSL
 23 APR. 81 1730 HRS MST
 ASCENSION NO. 294

UPPER AIR DATA
 1130020294
 WHITE SANDS
 TABLE 19

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL.HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES (TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
3989.0	880.5	17.7	5.6	45.0	1050.5	665.7	140.0	13.0
4000.0	880.2	17.7	5.6	45.0	1050.2	665.7	140.0	13.0
4500.0	864.5	16.3	4.7	46.0	1036.6	664.0	138.1	13.4
5000.0	849.2	15.9	3.8	47.2	1023.3	662.4	136.3	13.8
5500.0	833.9	13.4	3.4	50.6	1010.1	660.7	134.6	14.2
6000.0	818.5	11.9	2.9	54.0	997.1	658.9	133.0	14.6
6500.0	804.0	10.4	2.4	57.3	984.3	657.2	131.5	15.1
7000.0	789.4	8.9	1.8	60.7	971.7	655.4	130.3	15.4
7500.0	775.2	7.4	1.1	64.1	959.4	653.0	131.0	14.6
8000.0	761.0	6.1	.5	67.6	946.5	652.0	131.7	13.9
8500.0	747.0	4.9	.1	71.1	933.0	650.6	125.3	11.3
9000.0	733.2	3.7	-.4	74.6	919.8	649.2	115.0	8.8
9500.0	719.6	2.5	-.9	78.0	906.7	647.8	85.0	7.8
10000.0	706.2	2.0	-1.6	76.6	891.4	647.2	52.3	10.6
10500.0	693.0	1.6	-2.9	72.1	876.4	646.6	36.7	14.6
11000.0	680.0	1.0	-4.6	66.4	862.1	645.8	28.8	17.7
11500.0	667.1	-.4	-5.5	68.7	850.2	644.1	23.9	20.6
12000.0	654.5	-1.8	-6.4	71.0	838.5	642.4	23.4	22.0
12500.0	642.1	-3.2	-7.3	73.3	826.9	640.8	25.1	23.3
13000.0	630.0	-4.6	-8.2	75.6	815.5	639.1	52.9	24.6
13500.0	617.9	-5.8	-9.3	76.1	803.8	637.6	41.0	25.8
14000.0	606.1	-6.8	-10.7	74.0	791.4	636.5	49.9	27.0
14500.0	594.4	-7.0	-14.9	53.0	777.0	635.9	58.0	28.8
15000.0	582.8	-7.7	-17.8	44.2	764.2	635.0	64.4	30.9
15500.0	571.4	-8.8	-19.3	42.0	752.3	633.7	69.9	33.2
16000.0	560.3	-9.8	-20.9	39.7	740.5	632.5	73.4	35.7
16500.0	549.4	-10.8	-22.4	37.5	729.0	631.2	71.6	37.7
17000.0	538.7	-11.8	-24.0	35.3	717.6	630.0	70.0	39.8
17500.0	528.1	-12.7	-25.3	34.0	706.7	628.9	68.1	41.4
18000.0	517.6	-13.5	-25.9	34.0	694.1	627.9	65.8	42.4
18500.0	507.4	-14.2	-26.6	34.0	682.4	627.0	63.6	43.5
19000.0	497.3	-15.1	-27.3	34.0	670.9	626.0	62.7	44.7
19500.0	487.2	-16.1	-28.2	34.0	659.9	624.8	63.6	44.4
20000.0	477.3	-17.1	-29.1	34.0	649.0	623.6	64.5	45.0
20500.0	467.6	-18.1	-30.0	34.0	638.4	622.5	64.1	45.1
21000.0	456.1	-19.1	-30.9	34.0	627.9	621.1	62.4	44.7
21500.0	446.8	-20.1	-31.8	34.0	617.6	619.9	60.6	44.4
22000.0	436.7	-21.1	-32.7	34.0	607.5	618.6	58.8	44.3
22500.0	430.8	-22.1	-33.6	34.0	597.5	617.4	57.2	44.4
23000.0	422.0	-23.1	-34.5	34.0	587.7	616.1	55.5	44.6

STATION ALTITUDE 3989.00 FEET MSL
 23 APR. 81 1730 hrs. EST
 ASCENSION NO. 294

UPPER AIR DATA
 32.46043 LAT DEG
 106.37033 LONG DEG
 WHITHAM ANDUS

TABLE 19 CON'T

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	DEWPOINT PERCENT	REL.HUM. PERCENT	WIND DATA SOUND SPEED OF METER KNOTS	DIRECTION DEGREES (TN)	SPEED KNOTS	INDEX OF REFRACTION
23500.0	413.5	-24.1	-35.4	34.0	578.1	614.9	55.3	45.4
24000.0	405.1	-25.1	-36.3	34.0	568.7	613.7	56.2	46.8
24500.0	396.7	-26.2	-37.3	34.0	559.5	612.3	57.1	48.2
25000.0	388.3	-27.6	-38.5	34.0	550.7	610.6		1.000124
25500.0	380.1	-28.9	-39.7	34.0	542.1	608.9		1.000122
26000.0	372.1	-30.2	-41.0	34.0	533.5	607.2		1.000120
26500.0	364.2	-31.6	-42.2	34.0	525.2	605.5		1.000118
27000.0	356.5	-32.9	-43.4	34.0	517.0	603.6		1.000116
27500.0	349.0	-34.3	-44.6	34.0	508.9	602.1		1.000114

STATION ALTITUDE 3989.00 FEET MSL
 23 APR. 81 1730 HRS MST
 ASCENSION NO. 294

MANDATORY LEVELS
 1130020294
 WHITE SANDS

GEODETIC COORDINATES
 32.40043 LAT DEG
 106.37033 LON DEG

TABLE 20

PRESSURE MILLIBARS	GEOPOTENTIAL FEET	TEMPERATURE DEGREES	AIR DEWPNT CENTIGRADE	REL.HUM. PERCENT	WIND DATA DIRECTION DEGREES (TN)	WIND SPEED KNOTS
850.0	4971.	15.0	3.8	47.	136.4	13.8
800.0	6641.	10.0	2.2	58.	131.1	15.2
750.0	8387.	5.1	.2	70.	127.0	11.8
700.0	10224.	1.8	-2.0	76.	43.4	12.6
650.0	12175.	-2.3	-6.7	72.	23.3	22.5
600.0	14241.	-7.3	-11.6	71.	54.1	27.8
550.0	16456.	-10.7	-22.3	38.	71.7	37.6
500.0	18841.	-14.8	-27.1	34.	62.4	44.2
450.0	21432.	-19.9	-31.7	34.	60.8	44.4
400.0	24266.	-25.7	-36.9	34.	56.8	47.7
350.0	27388.	-34.1	-44.4	34.		